

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

1. (canceled) A system for automatically inputting grades into an electronic gradebook, comprising:

(a) a variably positionable grading label comprising a variably positionable data field containing data, wherein said data includes grade information and student identification information, wherein said variably positionable grading label comprises:

(i) an identification number input area, wherein said identification number input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia and

(ii) a grade input area, wherein said grade input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia and

(b) means for locating said variably positionable grading label, imaging said data field, and transferring data from said data field to an electronic gradebook.

2. (canceled) A system as recited in claim 1, wherein said variably positionable data field comprises a variably positionable data rectangle.

3. (canceled) A system as recited in claim 1, wherein said variably positionable data field resides on a document.

4. (canceled) A system as recited in claim 1, wherein said means comprises:

(a) a digital camera;

(b) a microprocessor connected to said digital camera; and

(c) programming associated with said microprocessor for carrying out the operations of:

- (i) finding said variably positionable data field;
- (ii) obtaining an image of said variably positionable data field;
- (iii) processing said data; and
- iv) transferring said processed data to said electronic gradebook.

5. (canceled) A system for automatically grading and inputting grades into an electronic gradebook, comprising:

(a) a variably positionable data field containing student identification information and grade information, wherein said grade information is selected from a group consisting of score information and answer information; and

(b) means for finding and imaging said data field and establishing and transferring a grade from said grade information and associated student identification information data from said variably positionable data field to an electronic gradebook.

6. (canceled) A system as recited in claim 5, wherein said variably positionable data field comprises a variably positionable data rectangle.

7. (canceled) A system as recited in claim 5, wherein said variably positionable data field resides on a document.

8. (canceled) A system as recited in claim 5, wherein said means comprises:

(a) a digital camera;

(b) a microprocessor connected to said digital camera; and

(c) programming associated with said microprocessor for carrying out the

operations of:

(i) finding said variably positionable data field;

(ii) obtaining an image of said data field;

(iii) processing said data to establish said grade and associated student identification information data; and

(iv) transferring said processed data to said electronic gradebook.

9. (canceled) A system as recited in claim 5, wherein said variably positionable data field comprises a variably positionable grading label.

10. (canceled) A system as recited in claim 5, wherein said variably positionable grading label comprises:

(a) an identification number input area, wherein said identification number input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia; and

(b) a grade information input area, wherein said grade information input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia.

11. (canceled) A system as recited in claim 10, wherein the identification number input area comprises said set of input bubbles, wherein said set of input bubbles comprises:

- (a) a first row of numbered input bubbles;
- (b) a second row of numbered input bubbles; and
- (c) a third row of numbered input bubbles.

12. (canceled) A system as recited in claim 11, wherein each row of numbered input bubbles comprises ten input bubbles, the input bubbles being individually and non-repeatingly numbered from zero to nine.

13. (canceled) A system as recited in claim 10, wherein the identification number input area comprises said set of boxed regions for hand-written indicia, wherein said set of boxed regions comprises one or more boxed regions.

14. (canceled) A system as recited in claim 10, wherein said grade information input area comprises a series of lettered input bubbles.

15. (canceled) A system as recited in claim 14, wherein said series of lettered input bubbles contain score information.

16. (canceled) A system as recited in claim 14, wherein said series of lettered input bubbles contain answer information.

17. (canceled) A system as recited in claim 10, wherein said grade information input area comprises a series of boxed regions for hand-written indicia.

18. (canceled) A system as recited in claim 17, wherein said series of boxed regions contain score information.

19. (canceled) A system as recited in claim 17, wherein said series of lettered input bubbles contain answer information.

20. (canceled) An apparatus for automatically grading and inputting grades into an electronic gradebook, comprising:

(a) a digital camera;

(b) a microprocessor connected to said digital camera; and

(c) programming associated with said microprocessor for carrying out the operations of:

- (i) finding a variably positionable data field;
- (ii) obtaining an image of a said variably positionable data field;
- (iii) processing data in said variably positionable data field; and
- (iv) transferring said processed data to said electronic gradebook.

21. (canceled) An apparatus as recited in claim 20, wherein said variably positionable data field comprises a variably positionable data rectangle.

22. (canceled) An apparatus as recited in claim 20, wherein said variably positionable data field resides on a document.

23. (canceled) An apparatus as recited in claim 20, wherein the data from said variably positionable data field includes grade information and student identification information.

24. (canceled) An apparatus as recited in claim 20, wherein said variably positionable data field comprises a variably positionable grading label.

25. (canceled) An apparatus as recited in claim 24, wherein said variably positionable grading label comprises:

(a) an identification number input area, wherein said identification number input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia; and

(b) a grade information input area, wherein said grade information input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia.

26. (canceled) An apparatus as recited in claim 25, wherein the identification number input area comprises said set of input bubbles, wherein said set of input bubbles comprises:

- (a) a first row of numbered input bubbles;
- (b) a second row of numbered input bubbles; and
- (c) a third row of numbered input bubbles.

27. (canceled) A system as recited in claim 26, wherein each row of numbered input bubbles comprises ten input bubbles, the input bubbles being individually and non-repeatingly numbered from zero to nine.

28. (canceled) A system as recited in claim 25, wherein the identification number input area comprises said set of boxed regions for hand-written indicia, wherein said set of boxed regions comprises one or more boxed regions.

29. (canceled) A system as recited in claim 25, wherein said grade information input area comprises a series of lettered input bubbles.

30. (canceled) A system as recited in claim 29, wherein said series of lettered input bubbles contain score information.

31. (canceled) A system as recited in claim 29, wherein said series of lettered input bubbles contain answer information.

32. (canceled) A system as recited in claim 25, wherein said grade information input area comprises a series of boxed regions for hand-written indicia.

33. (canceled) A system as recited in claim 32, wherein said series of boxed regions contain score information.

34. (canceled) A system as recited in claim 32, wherein said series of boxed regions contain answer information.

35. (canceled) A method for automatically grading and inputting data from a variably positionable data rectangle to an electronic gradebook, comprising:

(a) reading an image of a document having a variably positionable data rectangle;

- (b) finding said variably positionable data rectangle; and
- c) inputting identification information and grade information from said variably positionable data rectangle to the electronic gradebook.

36. (canceled) A method as recited in claim 35, further comprising calculating a grade from said grade information and inputting said grade to the electronic gradebook.

37. (canceled) A variably positionable grading label, comprising:
- (a) an identification number input area, wherein said identification number input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia; and
 - (b) a grade information input area, wherein said grade information input area is selected from a group consisting of a set of input bubbles and a set of boxed regions for hand-written indicia.

Claim 38. (currently amended) A system for automatically locating a variably positionable and variably angled data field on a document, automatically assigning a numerical score or a letter grade to the document, and transferring the numerical score or letter grade to an electronic database, comprising:

- a) a data field residing on the document in a variably positioned and variably angled location that is automatically determined as a result of calculated coordinates for an image feature surrounding said data field;

b) said image feature surrounding said data field used for identifying a location of said data field;

c) means for digitally imaging the document;

d) means for analyzing said digital image in order to accomplish a task of calculating said coordinates for said image feature, wherein said analyzing means utilizes image dithering programming logic that measures vertical and horizontal angles for said digital image feature, wherein said vertical and horizontal angles represent a rotational angle at which said digital image feature is rotated;

e) means for using said calculated coordinates as a reference for finding a region of interest containing user response data within said digital image;

f) means for analyzing a digital image within said region of interest to obtain a digital representation of said user response data contained in said region of interest;

g) means for generating a numerical score or letter grade from said digital representation of said user response data; and

h) means for transferring said numerical score or letter grade to the electronic database.

Claim 39. (withdrawn) An automatic score or grade assigning and transferring system, according to Claim 38, wherein said data field is variably positionable on the document.

Claim 40. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein said means for digitally imaging said document comprises a digital camera.

Claim 41. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein said user response data contains identification data and grade data.

Claim 42. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein said image feature surrounding said data field is a rectangle.

Claim 43. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein said user response data is selected from a group consisting of input bubbles and boxed regions for hand-written indicia.

Claim 44. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein the system is controlled by at least one microprocessor and associated programming.

Claim 45. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 38, wherein the electronic database is an electronic gradebook.

Claim 46. (currently amended) A system for automatically locating a variably positionable and variably angled data field on a document, automatically assigning a numerical score or a letter grade to the document, and transferring the numerical score or letter grade to an electronic gradebook, comprising:

- a) a variably positionable and variably angled data field residing on the document;
- b) an image feature surrounding said data field used for identifying a location of said data field;
- c) a digital camera for digitally imaging the document;
- d) means for analyzing said digital image in order to accomplish a task of calculating coordinates for said image feature, wherein no data field location information is known by the system prior to said digital imaging and coordinate calculation, wherein said analyzing means utilizes image dithering programming logic that measures vertical and horizontal angles for said digital image feature, wherein said vertical and horizontal angles represent a rotational angle at which said digital image feature is rotated;
- e) means for using said calculated coordinates as a reference for finding a region of interest containing user response data within said digital image, wherein said user response data contains identification data and grade data;
- f) means for analyzing a digital image within said region of interest to obtain a digital representation of said user response data contained in said region of interest;
- g) means for generating a numerical score or letter grade from said digital representation of said user response data; and

h) means for transferring said numerical score or letter grade to the electronic database.

Claim 47. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 46, wherein said image feature surrounding said data field is a rectangle.

Claim 48. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 46, wherein said user response data is selected from a group consisting of input bubbles and boxed regions for hand-written indicia.

Claim 49. (previously presented) An automatic score or grade assigning and transferring system, according to Claim 46, wherein the system is controlled by at least one microprocessor and associated programming.

Claim 50. (currently amended) A system for automatically locating a variably positionable and orientable data field on a document, automatically assigning a numerical score or a letter grade to the document, and transferring the numerical score or letter grade to an electronic database, comprising:

- a) a data field residing on the document;
- b) means for digitally imaging the document;
- c) an image feature surrounding said data field used for identifying a position, orientation, size, and distortion of said data field;

d) means for analyzing said digital image to accomplish a task of calculating said position, orientation, size, and distortion for said image feature, wherein said analyzing means utilizes image dithering programming logic that measures vertical and horizontal angles for said digital image feature, wherein said vertical and horizontal angles represent a rotational angle at which said digital image feature is rotated;

e) means for using said calculated position, orientation, size, and distortion as a reference for finding a region of interest containing user response data contained in said region of interest;

f) means for generating a numerical score or letter grade from said digital representation of said user response data; and

h) means for transferring said numerical score or letter grade to the electronic database.

Claim 51. (withdrawn) A system according to claim 50, wherein means for digitally imaging the document comprises an image sensor, lens, associated electronics, and support structure with no moving components required for said digital imaging means.

Claim 52. (currently amended) A system for automatically locating a variably positionable and orientable data field on a document, automatically assigning a numerical score or a letter grade to the document, and transferring the numerical score or letter grade to an electronic database, comprising:

a) a data field residing on the document;

- b) means for digitally imaging the document;
- c) an image feature surrounding said data field used for identifying a position, orientation, size, and distortion of said data field;
- d) means for analyzing said digital image to accomplish a task of calculating said position, orientation, size, and distortion for said image feature, wherein said analyzing means utilizes image dithering programming logic that measures vertical and horizontal angles for said digital image feature, wherein said vertical and horizontal angles represent a rotational angle at which said digital image feature is rotated;
- e) means for using said calculated position, orientation, size, and distortion as parameters for finding a position for a plurality of input bubbles;
- f) means for measuring a darkness for said input bubbles;
- g) means for generating a numerical score or letter grade from said darkness of said input bubbles; and
- h) means for transferring said numerical score or letter grade to the electronic database.

Claim 53. (withdrawn) A system according to claim 52, wherein means for digitally imaging the document comprises an image sensor, lens, associated electronics, and support structure with no moving components required for said digital imaging means.

Claim 54. (currently amended) A system for automatically locating a variably positionable and orientable data field on a ~~hand-held~~ document, automatically assigning

a numerical score or a letter grade to a the document, and transferring the numerical score or letter grade to an electronic database, comprising:

- a) a data field residing on the ~~hand-held~~ document;
- b) means for digitally imaging the document while being ~~hand-held~~ by a user, wherein said means for digitally imaging the document comprises an image sensor, lens, associated electronics, and support structure with no moving components required for said digital imaging means;
- c) an image feature surrounding said data field used for identifying a position, orientation, size, and distortion of said data field;
- d) means for analyzing said digital image to accomplish a task of calculating said position, orientation, size, and distortion for said image feature, wherein said analyzing means utilizes image dithering programming logic that measures vertical and horizontal angles for said digital image feature, wherein said vertical and horizontal angles represent a rotational angle at which said digital image feature is rotated;
- e) means for using said calculated position, orientation, size, and distortion as a parameters for finding a position for a plurality of input bubbles;
- f) means for measuring a darkness for said input bubbles;
- g) means for generating a numerical score or letter grade from said darkness of said input bubbles; and
- h) means for transferring said numerical score or letter grade to the electronic database.

Claim 55. (withdrawn) A system according to claim 54, wherein means for digitally imaging the document comprises an image sensor, lens, associated electronics, and support structure with no moving components required for said digital imaging means.